

2000 VEHICLE CRASH REPORT

for the
GREATER LAFAYETTE AREA
TRANSPORTATION and DEVELOPMENT STUDY

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Prepared by the
AREA PLAN COMMISSION of TIPPECANOE COUNTY

Overall Work Program Element 521

in cooperation with:

Lafayette Police Department
West Lafayette Police Department
Tippecanoe County Sheriff's Department
Indiana State Police, West Lafayette Post
Indiana Department of Transportation
Battle Ground Police Department
Purdue Police Department, and
Dayton Police Department

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I. INTRODUCTION

Vehicle crashes are an inevitable occurrence in any highway transportation system. Crashes result from three primary factors: operator error, vehicular failure, or highway environment, including weather and/or facility deficiencies. Given the thousands of crashes reported to law enforcement officials on an annual basis, the task of identifying specific factors for all roads, streets, and intersections in Tippecanoe County can be complex and costly. Identifying problem locations within the study area's highway system is also complicated by the random nature of vehicle crashes. Crashes are a dynamic phenomenon: they change in response to land use and other economic variables. Identifying and evaluating crash patterns requires a comprehensive, readily accessible, and inexpensively maintained database.

The crash study for Calendar Year (CY) 2000 includes all of Tippecanoe County, as shown in **Figure 1**. City boundaries are shown to help orient the reader with respect to locations within the county. Prior to the 1999 report, staff used the Greater Lafayette Area Transportation and Development Study (GLATDS) boundary. The INDOT Highway Accident Analysis Section provided the database, which consists of vehicle crashes recorded in Tippecanoe County. Discrepancies in the database were cross-referenced with copies of the original crash reports. Copies are provided by Lafayette and West Lafayette Police, Tippecanoe County Sheriff, Indiana State Police, Purdue University Police, Dayton Police, and Battle Ground Police.

Through the early 1980's, the Area Plan Commission staff collected crash data with help from all police jurisdictions and INDOT's Crawfordsville District. The goal was to identify intersections that experienced a considerable number of crashes. These locations were then investigated in greater detail with the aid of collision diagrams.

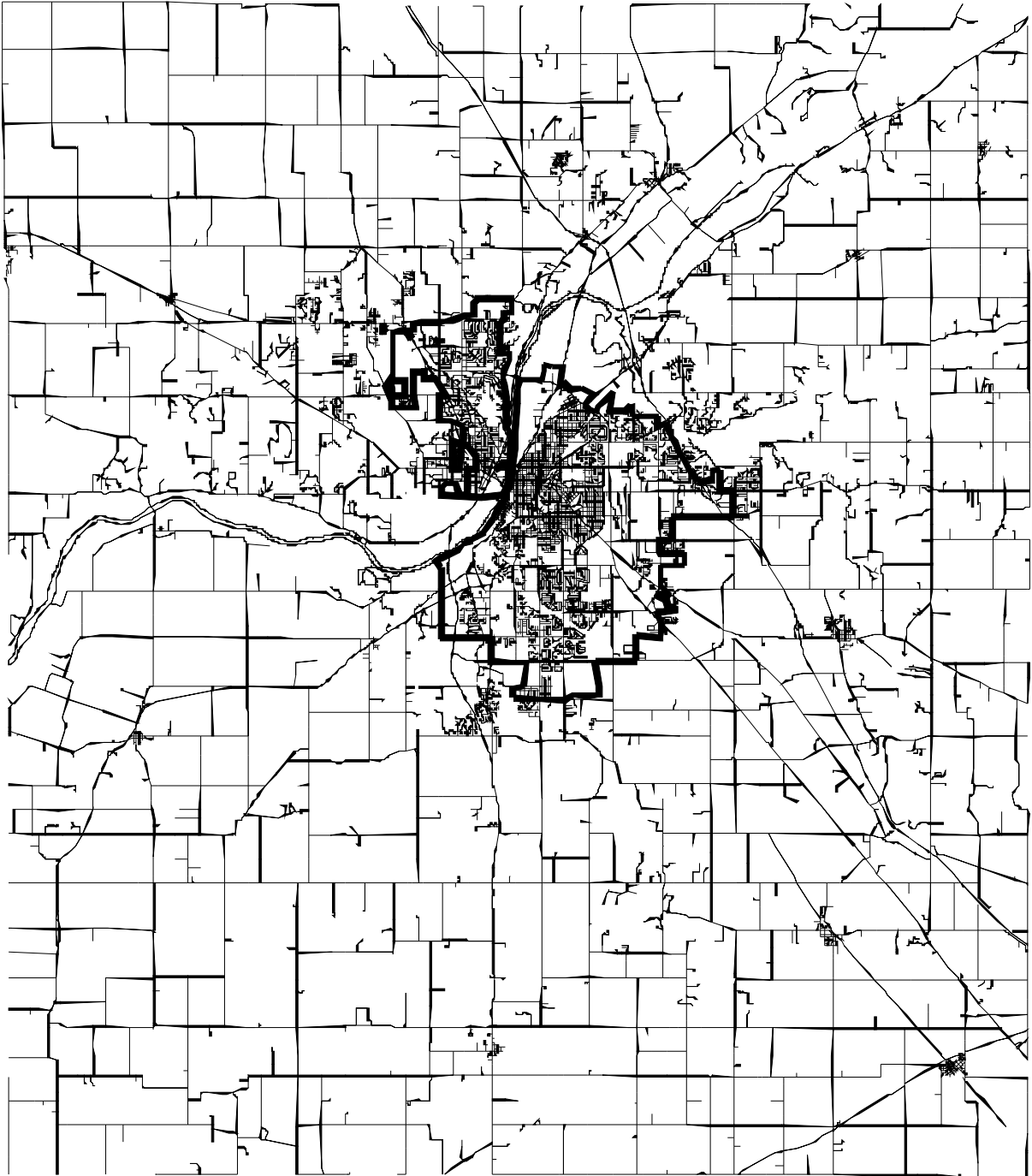
In 1989, the Area Plan Commission staff once again began collecting data. Staff collected copies of reports recorded by local police agencies. With the aid of a microcomputer, a new format was developed. Crash data can now be comprehensively arranged into specific formats. This enables a researcher to quickly access specific information.

The objective of this study is to analyze the 2000 Vehicle Crash database and identify crash locations or intersections that are considered to be hazardous. Further analysis was performed to determine significantly hazardous locations by comparing past crash totals. Once hazardous intersections are located, efforts to correct deficiencies can be made to create a safer, more productive transportation system. This may include sight distance or intersection geometry improvements, the insertion of traffic controls, or any other measure professional engineers deem appropriate.

This analysis achieves three goals: 1) it provides accurate documentation of reported vehicle crashes for local government engineers, police, and elected/appointed officials; 2) it provides a data base which is comprehensive, easy to use, and cost efficient; and 3) it provides a tool to implement Intelligent Transportation Systems and System Management goals established by the Transportation Efficiency Act of the 21st Century.

Figure 1

Study Area, 2000



We would like to express our gratitude to the Lafayette and West Lafayette Police Departments, the Tippecanoe County Sheriff's Department, Indiana State Police, Purdue University, Battle Ground, and Dayton Police for their cooperation in assisting us.

II. SCOPE OF STUDY

Many tasks are involved in performing a Vehicle Crash study, from the actual recording of numerous crashes by law enforcement agencies to the final analysis and report. Local law enforcement officials recorded 6,626 crashes within Tippecanoe County that occurred on public roads. This comes to an average of eighteen per day. As mentioned above, the study area has been expanded to include the entire county, as opposed to the study area used in all previous reports. This is the same number that had occurred in CY 1999, but more data is needed to ascertain whether overall crash totals are stabilizing.

In an effort to deal with these complexities, INDOT's Highway Accident Analysis Section has developed a standard database recording all vehicle crashes occurring within a calendar year. This easily accessible and efficient resource further aids APC staff in achieving its twofold goal of completing the appropriate analyses and identifying problem areas. The end result, as noted above, is a safer and more productive transportation network. The database structure and the ensuing analyses are described in the following sections.

III. DATA BASE STRUCTURE

The CY 2000 crash database is designed around the "Indiana Officer's Standard Crash Report (State form 23558R3)", recognized by the Indiana State Police for reporting vehicle crashes (**Appendix A**). This form requires law enforcement officers to record over 170 pieces of information for a typical two-vehicle crash. INDOT's Highway Accident Analysis Section records pertinent information from crash reports into specific fields within the database. Staff members can then analyze the fields within the database to determine the hazardous locations and intersections.

The data base structure consists of 46 fields (**Table 1**). Each field is numbered, named, and briefly described. The microcomputer application used also shows the field character type and width. For example, Field 1 is named ACCNUM and it records the crash number from individual crash reports.

The crash number is a numeric field with a width of eleven digits. It consists of the calendar year, month and day, and a corresponding ascending order number. The second field is named DAY and it identifies the day of the week on which the crash occurred. The third field (TIME) is numeric with a width of four digits; it records in military time when the crash occurred.

Table 1

2000 VEHICLE CRASH STUDY DATA BASE STRUCTURE

Field Number	Field Name	Field Description	Field Type	Width
1	ACCNUM	Accident Number	N	11
2	DAY	Day of Week	N	1
3	TIME	Time of Day	N	4
4	NUMVEH	Number of Vehicles	N	2
5	NUMINJ	Number of Injured	N	2
6	NUMDEAD	Number Dead	N	2
7	NUMPED	Number Ped	N	2
8	TWNSHP	Township	N	2
9	CITY	City	N	4
10	MLPOST	Nearest Milepost	N	3
11	DFR1	Dist. from Reference	N	5
12	DU	Property Type	N	1
13	DFR2	Direction from Ref.	N	1
14	AGENCY	Recording Agency	N	1
15	CIRCUM	Acc. Circumstance	N	2
16	COLDIA	Collision Diagram	N	2
17	DAMAGE	Location of Damage	N	1
18	LOCAL	Location of Accident	N	1
19	CINST	Construction Status	N	1
20	LIGHT	Light Condition	N	1
21	WEATHER	Weather Condition	N	1
22	SURFTYP	Surface Type	N	1
23	SURFCHAR	Surface Character	N	1
24	SURFCOND	Surface Condition	N	1
25	SURFMAT	Hazard Material Inv.	N	1
26	FILM	Film Index Status	N	7
27	VEHTYP1	Vehicle Type (1)	N	2
28	TRAVDIR1	Travel Direction (1)	C	2
29	VEHACT1	Vehicle Action (1)	N	2
30	COL1	Collision Involved (1)	N	2
31	TRAFCON1	Traffic Control (1)	N	2
32	VEHTYP2	Vehicle Type (2)	N	2
33	TRAVDIR2	Travel Direction (2)	C	2
34	VEHACT2	Vehicle Action (2)	N	2
35	COL2	Collision Involved (2)	N	2
36	TRAFCON2	Traffic Control (2)	N	2
37	VEHTYP3	Vehicle Type (3)	N	2
38	TRAVDIR3	Travel Direction (3)	C	2
39	VEHACT3	Vehicle Action (3)	N	2
40	COL3	Collision Involved (3)	N	2
41	TRAFCON3	Traffic Control (3)	N	2
42	PROAD	Primary Road No.	N	6
43	RROAD	Secondary Road No.	N	6
44	AGE1	Driver Age Veh. (1)	N	2
45	AGE2	Driver Age Veh. (2)	N	2
46	AGE3	Driver Age Veh. (3)	N	2

Fields 4-7 record the number of vehicles, injuries, fatalities, and pedestrians involved in each crash. Fields 8-9 record the municipality and township where the crash occurred. Fields 10 and 11 provides a geographical reference which helps identify its exact location. Field 10 identifies the nearest milepost to the crash site and Field 11 identifies the distance from the "reference road", the primary road on which the crash occurred. Field 13 defines the direction from the "reference road" in which the crash occurred. These fields can also help identify the nearest intersection.

Field 12 records the type of property (private drive, parking lot, etc.) on which the crash occurred, and Field 14 indicates which law enforcement agency recorded the crash. Field 15 describes primary contributing circumstances for the crash. Forty-three primary contributing circumstances, ranging from alcohol or drugs to brake or tire failure, are coded according to key found in the "Accident Report Code Sheet". This is also in **Appendix A**.

Field 16 refers to the collision diagram recorded by the officer. It represents a coded sketch of vehicular actions before and during the collision. Field 17 refers to the location of first impact or damage to the primary vehicle. The type of land use at the site of the crash (school, public park, residential, etc.) is referred to in Field 18. Field 19 indicates if the crash occurred in a construction zone or area.

Field 20 describes light condition (daylight, street lighting, no lights, etc.) at the crash location, and Field 21 describes weather (rain, snow, clear, etc.). Fields 22-23 refer to road surface type (concrete, blacktop, dirt/gravel, etc.) and character (straight/level, curve/hillcrest, etc.). Field 24 refers to surface condition (dry, wet, or covered with snow and ice). Field 25 notes if hazardous materials were involved, and Field 26 shows the film index status, or location of the crash report on microfilm.

Fields 27-31 refer to the primary or first vehicle involved in the crash. Field 27 refers to the type of vehicle involved (car, truck, bus, motorcycle, etc.). The only character field types in the data base are Fields 28, 33, and 38 which describe the direction of travel for the first, second, and third vehicle by using the appropriate initials (N, S, E, W, etc.).

Field 29 refers to the pre-crash action of the first vehicle involved: going straight, turning left or right, passing, etc. Field 30 describes what the primary vehicle collided with: another vehicle, pedestrian, train, animal/deer, or fixed object such as a tree or a bridge support. Field 31 describes the type of traffic control (R.R. crossing gate, traffic signal, stop sign, etc.) that was relevant to the crash location. Fields 32-36 are identical to the above fields and are applied if a second vehicle is involved in a crash. Fields 37-41 are applied if a third vehicle is involved.

Perhaps the most crucial data are recorded in Fields 42 and 43: identification of the "pseudo road" (primary road) and "reference road" (secondary road). By referring to the accompanying pseudo number list of all the streets and roads within the study area, the crash location and intersection can be identified. Finally, Fields 44-46 refer to the age of the drivers in the first, second, and third vehicles involved in the crash.

Over the course of a calendar year, thousands of crashes occur in Tippecanoe County. However, to be recorded by a local law enforcement agency, either the total damage to vehicles or objects must amount to \$750 or more or the crash must involve a personal injury.

In order to accurately perform a crash study for Tippecanoe County, APC staff established an important parameter. Only crashes occurring on public streets or roads maintained by the municipalities, County, or State were included. Crashes occurring on private drives, private property or parking lots, were not.

For 2000, APC staff determined that 6,626 crashes met this criterion. Analysis was performed by selecting from the data base structure and the relevant fields. The following sections contain major findings from the analysis of this database.

IV. 2000 DATA ANALYSIS

The **2000 Vehicle Crash Report** is separated into three analysis sections. In the first section, 2000 crash data is analyzed from two perspectives: a macro-analytical or system-wide analysis of all crashes in the study area, followed by a micro-analytical look at specific intersections.

Crashes were analyzed by severity, functional classification, time of year, day of week, and hour of day. The intersection analysis involves ranking intersections by vehicle crash frequency and exposure rate to determine critical intersections. A cross-tabulated comparison of crash data from 1996 through 2000 follows in the third section, which examines historical patterns or trends. Finally, intersections with significant percentage increases or decreases are analyzed.

A. System-wide Analysis

The first analysis involves crashes by severity (**Table 2**): property damage only (\$750 or more of total damage to vehicles and objects), personal injury (one or more persons injured), and fatal injury (one or more fatalities). Of the 6,626 qualified vehicle crashes reported in the study area in 2000, 81.9% of them were "property damage only", and 17.7% of all crashes involved one or more personal injuries. Fatal injuries accounted for only 0.4%, less than one-percent. **Figure 2** shows the severity distribution.

The second analysis involves crashes by functional classification and severity (**Table 3**). The street classification with the highest percentage of crashes in 2000 was Principal Arterials with 41.8%. This is not surprising since Principal Arterials carry the most traffic of any other street classification. The second highest percentage of crashes occurred in the Minor Arterial category at 22.9%, which carry less traffic but generally are more numerous than Principal Arterials. A close third was the "Local" category with 15.2%. A local road or street's primary function is to provide local access. The high percentage may be attributable to the large number of local roads and streets. However, more motorists may be using these streets to circumnavigate congested

arterial routes. The remaining classifications and percentages are broken down in **Figure 3**.

Table 4 details the number of crashes that occurred each month with December having the most crashes at 706, or 10.7% of the total. As expected, July had the fewest number of crashes with 432, or 6.5%. Usually, the winter months have the higher crash totals than the summer months because of differing weather and travel patterns. However, February has had either the lowest or second-lowest number of crashes since 1995. In 2000, February ranked tied for sixth place for the lowest number of crashes. Since the weather patterns for this month is highly variable, further study is needed to produce a more reliable trend.

As in past studies, **Table 5** shows Friday to be the day of the week with the most crashes; Sunday had the fewest. This is a direct correlation with traffic volume: Sunday is the least traveled day, while Friday is the most. Usually, crashes gradually increase during the week, peaking on Friday (**Figure 5**). However, Monday had the second most number of crashes with 956. From Tuesday to Thursday, the crash totals gradually rise until they spike on Friday.

Past studies have shown that crashes are more likely to occur during evening peak hours. During the week, traffic volume is usually at or near capacity during evening peak hours, defined as 3:00 to 6:00PM. In 2000, the 3:00-4:00PM hour had the most crashes with 6000; 4:00-5:00PM was second with 571; and 5:00-6:00PM was third with 537 (**Table 6**). As a whole, evening peak hours accounted for 25.7% of all crashes in 2000. **Figure 6** shows hourly crash trends with spikes for morning and noon rush hours.

Table 7 deals with the top ten circumstances leading to the crash. Unsurprisingly, the most frequently cited cause was following too closely. This reason accounts for almost one-fifth of the incidents, with failure to yield right-of-way close behind at 17.8%. A distance third was driver inattention was 7.8%. All told, mechanical failures comprise of less than 1% of all crashes, and approximately 11% of crashes were due to defective road design or repairs.

For all crashes that involve some type of collision, the type of collision is indicated. **Table 8** shows the different kinds of such collisions and their frequency. Rear-end collisions comprise almost one-third of crashes on public roads. Behind that, right-angle crashes make up over 22% of the total. Off-road collisions accounts for almost 9% as well.

Table 9 describes what vehicles most commonly collide with in crashes. This table clearly shows that a vehicle is most likely to hit another vehicle. Unfortunately, there were 304 crashes involving at least one deer. Many items that the second or third vehicle hit go unreported or are not known, so the overall accuracy of these two columns is uncertain.

Table 2

Vehicle Crashes by Severity Classification, 2000

Severity Classification		Number of Crashes		Percent of Total
Property Damage		5,103		81.44%
Personal Injury		1,136		18.13%
Fatal Injury		27		0.43%
Total		6,266		100.00%

Figure 2

Vehicle Crashes by Severity Classification, 2000

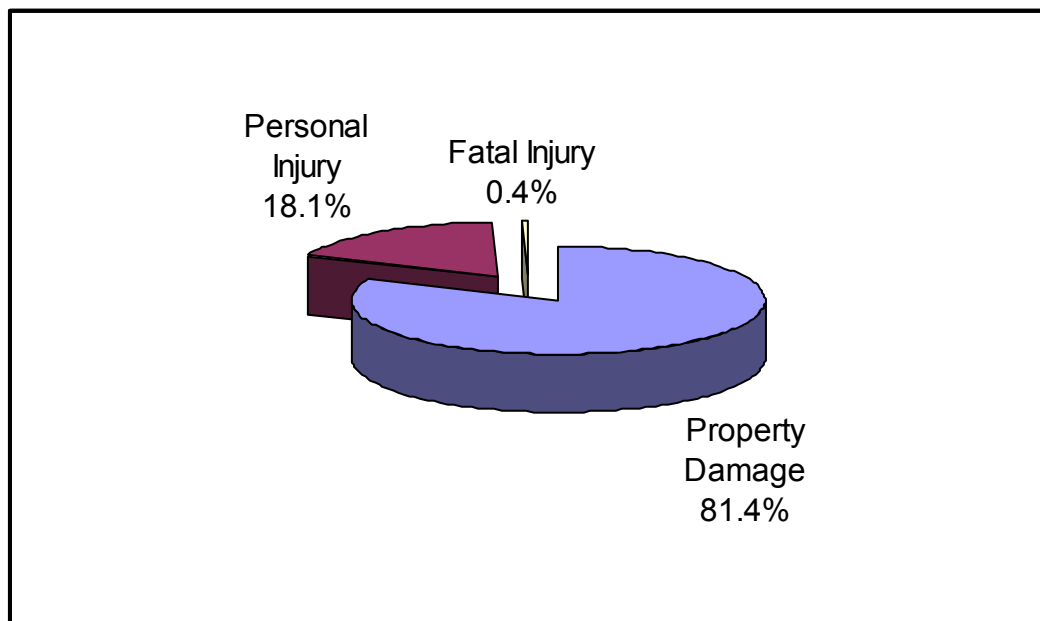


Table 3

Vehicle Crashes by Functional and Severity Classification, 2000

Functional Class	Property Damage	Personal Injury	Fatal Injury	Total Number	Percent of Total
Interstate	4	56	318	378	6.03%
Principal Arterial	9	522	2,116	2,647	42.24%
Minor Arterial	5	245	1,156	1,406	22.44%
Collectors	5	175	711	891	14.22%
Local	4	138	802	944	15.07%
Total	27	1,136	5,103	6,266	100.0

Table 3

Vehicle Crashes by Functional Class, 2000

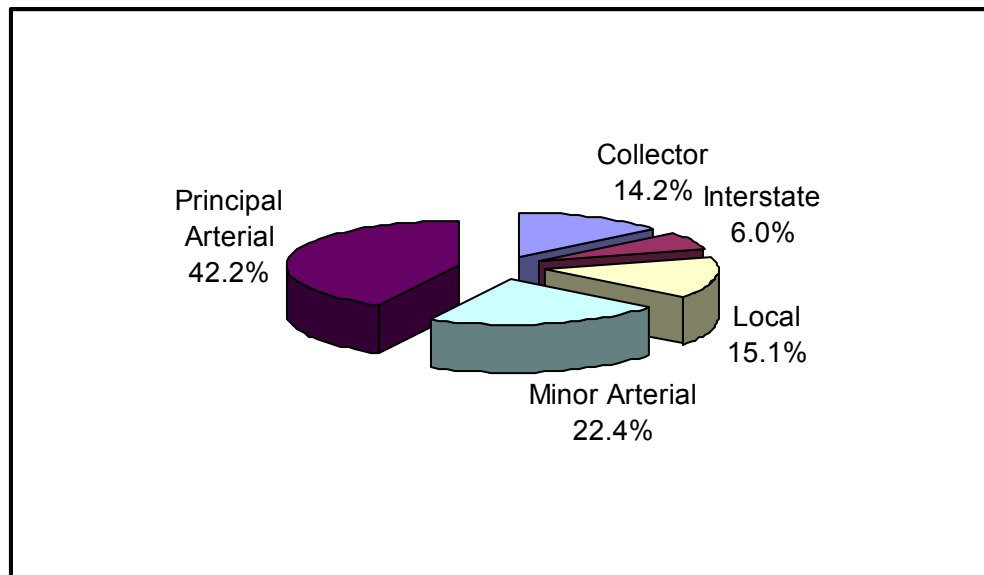


Table 4

Vehicle Crashes by Month and Severity Classification, 2000

Month	Property Damage	Personal Injury	Fatal Injury	Total Number	Percent of Total
January	515	82	2	599	9.0%
February	448	101	4	553	8.3%
March	403	81	5	489	7.4%
April	447	95	1	543	8.2%
May	469	103	1	573	8.6%
June	377	105	5	487	7.3%
July	336	94	2	432	6.5%
August	399	109	1	509	7.7%
September	457	113	4	574	8.7%
October	457	95	1	553	8.3%
November	511	95	2	608	9.2%
December	608	98	0	706	10.7%
Total	5,427	1,171	28	6,626	100.0%

Figure 4

Vehicle Crashes by Month and Severity Classification, 2000

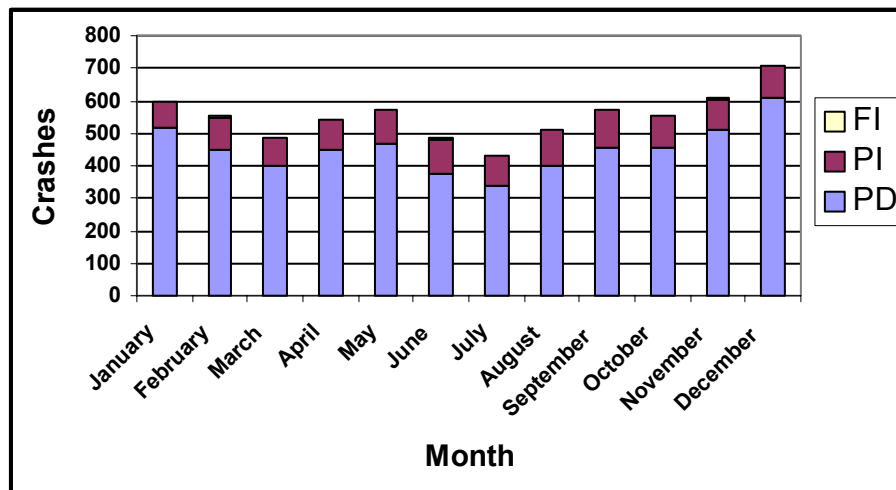


Table 5

**Vehicle Crashes by Day of Week and
Severity Classification, 2000**

Day	Property Damage	Personal Injury	Fatal Injury	Total Number	Percent of Total
Sunday	544	112	4	660	10.0
Monday	778	176	2	956	14.4
Tuesday	737	136	5	878	13.3
Wednesday	751	170	4	925	14.0
Thursday	805	184	4	993	15.0
Friday	1,057	216	5	1,278	19.3
Saturday	755	177	4	936	14.1
Total	5,427	1,171	28	6,626	100.0

Figure 5

**Vehicle Crashes by Day of Week and
Severity Classification, 2000**

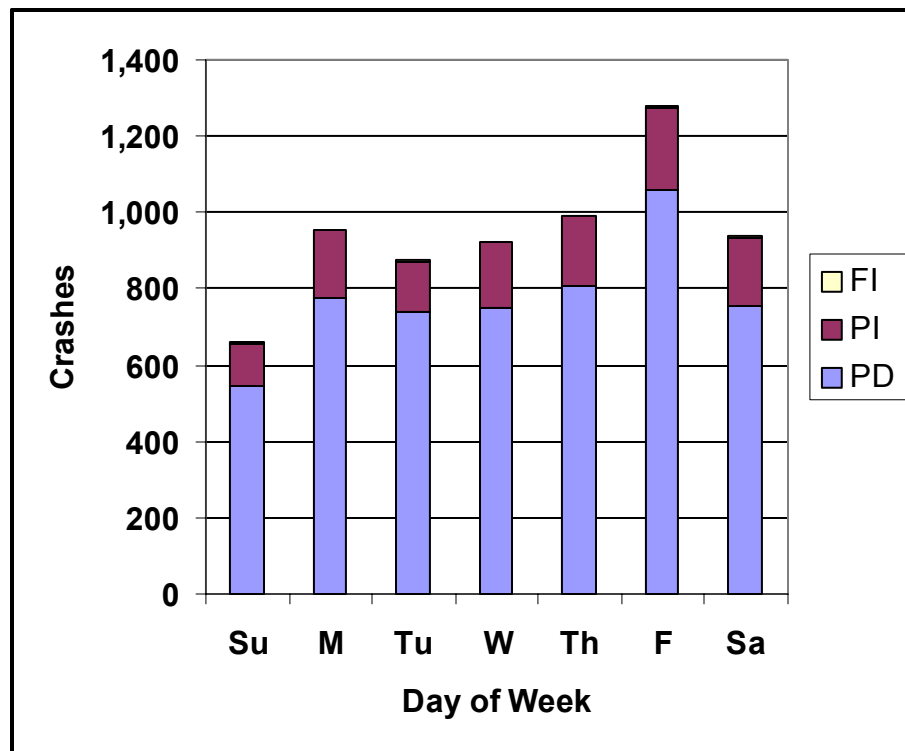


Table 6**Vehicle Crashes by Hour of Day and
Severity Classification, 2000**

Time	Property Damage	Personal Injury	Fatal Injury	Total Number	Percent of Total
12 AM - 1	83	25	1	109	1.6%
1:00 - 2:00	55	16	0	71	1.1%
2:00 - 3:00	50	14	1	65	1.0%
3:00 - 4:00	55	10	2	67	1.0%
4:00 - 5:00	41	6	0	47	0.7%
5:00 - 6:00	73	12	1	86	1.3%
6:00 - 7:00	91	27	3	121	1.8%
7:00 - 8:00	250	55	1	306	4.6%
8:00 - 9:00	224	40	2	266	4.0%
9:00 - 10:00	187	47	0	234	3.5%
10:00 - 11:00	222	38	3	263	4.0%
11:00 - 12:00	283	68	1	352	5.3%
12 PM - 1	368	74	1	443	6.7%
1:00 - 2:00	359	80	2	441	6.7%
2:00 - 3:00	358	84	1	443	6.7%
3:00 - 4:00	486	112	2	600	9.1%
4:00 - 5:00	488	83	0	571	8.6%
5:00 - 6:00	445	92	0	537	8.1%
6:00 - 7:00	308	59	3	370	5.6%
7:00 - 8:00	228	67	1	296	4.5%
8:00 - 9:00	201	41	0	242	3.7%
9:00 - 10:00	198	43	1	242	3.7%
10:00 - 11:00	166	34	1	201	3.0%
11:00 - 12:00	110	34	1	145	2.2%
Unknown	98	10	0	108	1.6%
Total	5,427	1,171	28	6,626	100.0%

Figure 6

**Vehicle Crashes by Hour of Day and
Severity Classification, 2000**

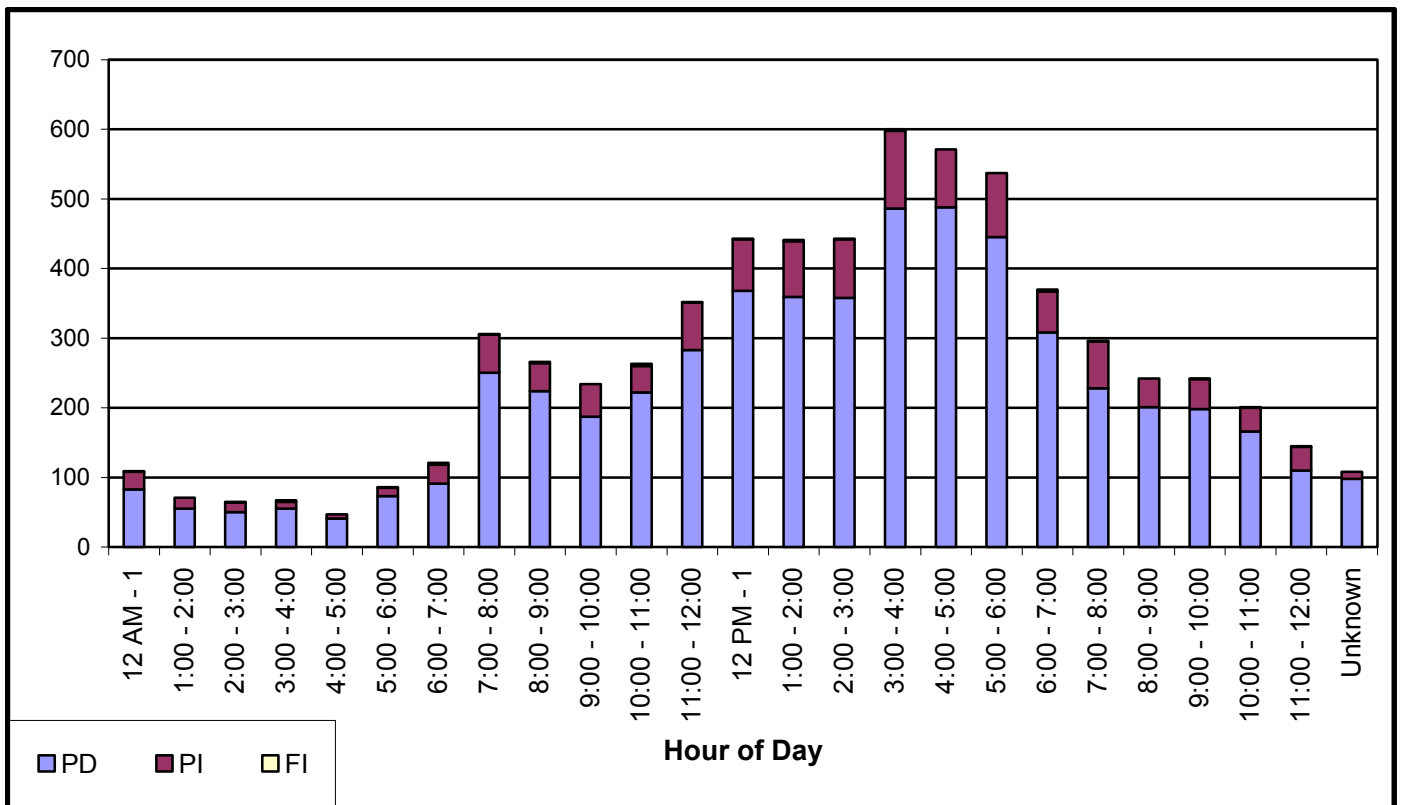


Table 7
Top Ten Circumstances Leading to Crash, 2000*

Reported Circumstance	Frequency	Percent of Total
Following Too Closely	1,284	19.4%
Failure to Yield ROW	1,178	17.8%
Driver Inattention	520	7.8%
Unsafe Speed	449	6.8%
Animal Present in Road	349	5.3%
Material on Surface (Inc. Weather)	323	4.9%
Signal/Signpost Disregarded	319	4.8%
Improper Turning	260	3.9%
Unsafe Backing	249	3.8%
Improper Lane Usage	235	3.5%

Table 8
Types of Collisions, 2000*

Collision Diagram	Total	Percent of Total
Rear End	2,079	31.4%
Right-Angle	1,504	22.7%
Same Direction Sideswipe	708	10.7%
Off Road Collision	586	8.8%
Head-on	454	6.9%
Left Turns (overall)	410	6.2%
Opposite Direction Sideswipe	177	2.7%
Right Turns (overall)	94	1.4%

Table 9
Leading Object of Collision, 2000*

Object Struck	Vehicle 1	Vehicle 2	Vehicle 3
Other Vehicle	4,730	4,661	393
Deer	304	2	0
Earth Embankment	173	1	1
Utility Pole	106	1	0
Tree	101	2	0
Guard Rail/Median Wall	94	1	0
Signpost	89	1	0
Curbing	72	1	0
Bicyclist	59	3	0
Pedestrian	47	1	0
Mailbox	28	0	0
Train	7	1	0

* As reported by the INDOT Electronic Database

B. Intersection Analysis

Staff identified critical intersections for the 2000 study, using the ***Manual of Traffic Engineering Studies*** as a guide. We used the "One Hundred Foot Rule" to identify intersections that reported the most frequent number of crashes: any crash occurring within one hundred feet of the intersection was counted as having taken place at that intersection. Also, both principal and reference pseudocodes had to be clearly identified, which was unnecessary for the system-wide analysis. In 2000, 4,824 crashes met these criteria, or 73% of the total.

According to ***Identification of Hazardous Locations***, (Report No. FHWA-RD-77-83), intersections reporting ten or more crashes per year are considered "very hazardous". Therefore, intersections having ten or more crashes occurring within 100 ft. of the intersection were ranked by crash frequency to determine critical intersections and hazardous locations.

Intersections with ten or more crashes in 2000 accounted for 31% of the total number of crashes, while in 1999 only 20% of crashes were at such intersections. Many locations are new to the list this year, and even those barely surpassed the ten-crash guideline. These intersections require further monitoring to see whether they will maintain this minimum in the future.

The intersection with the highest number of crashes in Tippecanoe County for CY 2000 was once again US 52 at SR 26 with 73 (**Table 10**). It has ranked as the intersection with the most crashes four out of the past six years. With over 82,000 vehicles entering the intersection daily, it is no surprise that it ranks at or near the top annually.

US 52 at SR 38/Main Street ranked second with 45 crashes, with Columbia and Main Street coming in 3rd with 40. Six of the top ten hazardous intersections in 2000 are repeat performers from 1999's list. New to the top ten in 2000 are: SR 26 at Farabee; Columbia at Main; US 52 at SR 25/Schuyler; and South at 18th (**Figure 7**).

The Million Entering Vehicles Rate (MEV) provides an additional means of ranking intersections. It is an exposure rate generating a ratio of crashes to traffic volume. The intersection with the highest MEV rate in 2000 was 10th Street at Ferry (**Table 11**). This location has not appeared on any hazardous location list since at least 1994. Further monitoring is needed to determine whether this was a random occurrence. Only two intersections remain from the CY 1999 list: Earl at Main and Teal at Concord (**Figure 8**).

To determine the significance of the MEV rate, a Critical Rate Factor (CRF) was used. First, we used the MEV and crash frequency for a specific time period (365 days) to produce a crash rate. Then we averaged this value to generate a critical rate factor with a 95% confidence level, leaving only 5% probability that the number of crashes at an intersection happened by chance alone. An intersection with an actual MEV rate higher than its CRF is determined to be critical or significant. For 2000, seven of the top ten intersections were determined to have significant MEV rates.

Table 10

Hazardous Intersections* Ranked by Crash Frequency, 2000

Rank	Intersection	Total	Rank	Intersection	Total
1	US 52 - SR 26	73	T28	Chauncey-Wood	22
2	SR 38/Main - US 52	45	34	Main-9th	21
3	Columbia - Main	40	T35	3rd - Columbia	20
4	SR 26 - Farabee	38	T35	US 52 - Duncan	20
T5	Teal - Concord	37	T35	S.R. 26-Progress Dr.	20
T5	Main - Earl	37	T38	State - River	19
7	South - Earl	36	T38	4th - Columbia	19
8	18th - South	35	T38	26th/Sequoia - Teal	19
T9	Stadium - Northwestern	34	T38	Earl - Kossuth	19
T9	US 52 - SR 25N/Schuyler	34	T38	Creasy Lane-Union	19
11	Creasy Ln - SR 26	33	T43	State - Andrew/Pierce	18
12	US 52 - Kossuth	32	T43	4th - Kossuth	18
13	US 52 - Greenbush	31	T43	9th - Duncan	18
T14	Creasy-McCarty	30	T43	10th-Ferry	18
T14	22nd - Teal	30	T47	State - Northwestern	17
T16	US 52 - McCarty	27	T47	US 52 - Brady/Creasy	17
T16	US 52 - Teal	27	T47	South - Main	17
T16	3rd - South	27	T47	Old US 231 - SR 25W	17
T19	SR 26 - I-65 (Ramps A & B)	26	T47	18th-Greenbush St.	17
T19	18th - Teal	26	T47	6th-Columbia	17
T19	US 52 - Salisbury	26	T53	SR 38 - Creasy	16
22	US 52 - Yeager	25	T53	Main - Kossuth	16
T23	US 52 - Union	24	T55	State - Chauncey	15
T23	4th - South	24	T55	6th - Salem	15
T23	Teal - Summerfield	24	T55	18th - Union	15
T23	State - Salisbury	24	T55	2nd - Columbia	15
T23	2nd - South	24	T59	Stadium - University	14
T28	18th - Kossuth	22	T59	US 52-Cumberland	14
T28	State - Grant	22	T59	18th - Main	14
T28	18th - Salem	22	T59	CR 350S - US 52	14
T28	US 231/4th - Teal	22	T59	Pierce St.-Wood	14
T28	SR 25N - I 65 (Ramps A & B)	22	T59	Northwestern-Columbia	14

Table 10
(Continued)

Rank	Intersection	Total	Rank	Intersection	Total
T59	18th-Ortman	14	T86	US 52 - SR 443 (Ramp D)	11
T59	CR 500E-McCarty	14	T86	Greenbush - Elmwood	11
T67	SR 43 - I-65 (Ramp A)	13	T86	18th - Elmwood	11
T67	SR 25 - Old Romney Rd	13	T86	6th-South	11
T67	9th - South	13	T86	S.R. 43-CR 600N	11
T67	SR 26 - 36th	13	T86	Northwestern-Yeager	11
T67	9th - Union	13	T86	4th-Main	11
T67	9th - Ferry	13	T86	River Rd.-Quincey	11
T67	Wiggins-Salisbury	13	T95	Grant - Northwestern	10
T67	9th-Greenbush	13	T95	9th - Teal Rd	10
T67	Union-Shenandoah	13	T95	SR 26-Hamman	10
T76	6th - Union	12	T95	9th-Columbia	10
T76	Main - McCarty	12	T95	Stadium-Russell	10
T76	State - Russell	12	T95	9th-Brown St.	10
T76	30th - Teal Rd	12	T95	State-Sheetz	10
T76	US 231-Elston	12	T95	S.R. 25-CR 300N	10
T76	Grant-Stadium	12	T95	Fowler-Northwestern	10
T76	18th-Brady Lane	12	T95	SR 26-CR 550E	10
T76	SR 26-Fairington	12	T95	3rd-Main	10
T76	Shenandoah-SR 26	12	T95	SR 38-Haggerty Lane	10
T76	4th-Fountain	12	T95	9th-Burnetts	10
T86	9th - Salem	11			

* "One Hundred Foot Rule" is applied

Figure 7

Ten Most Hazardous Locations
by Crash Frequency, 2000

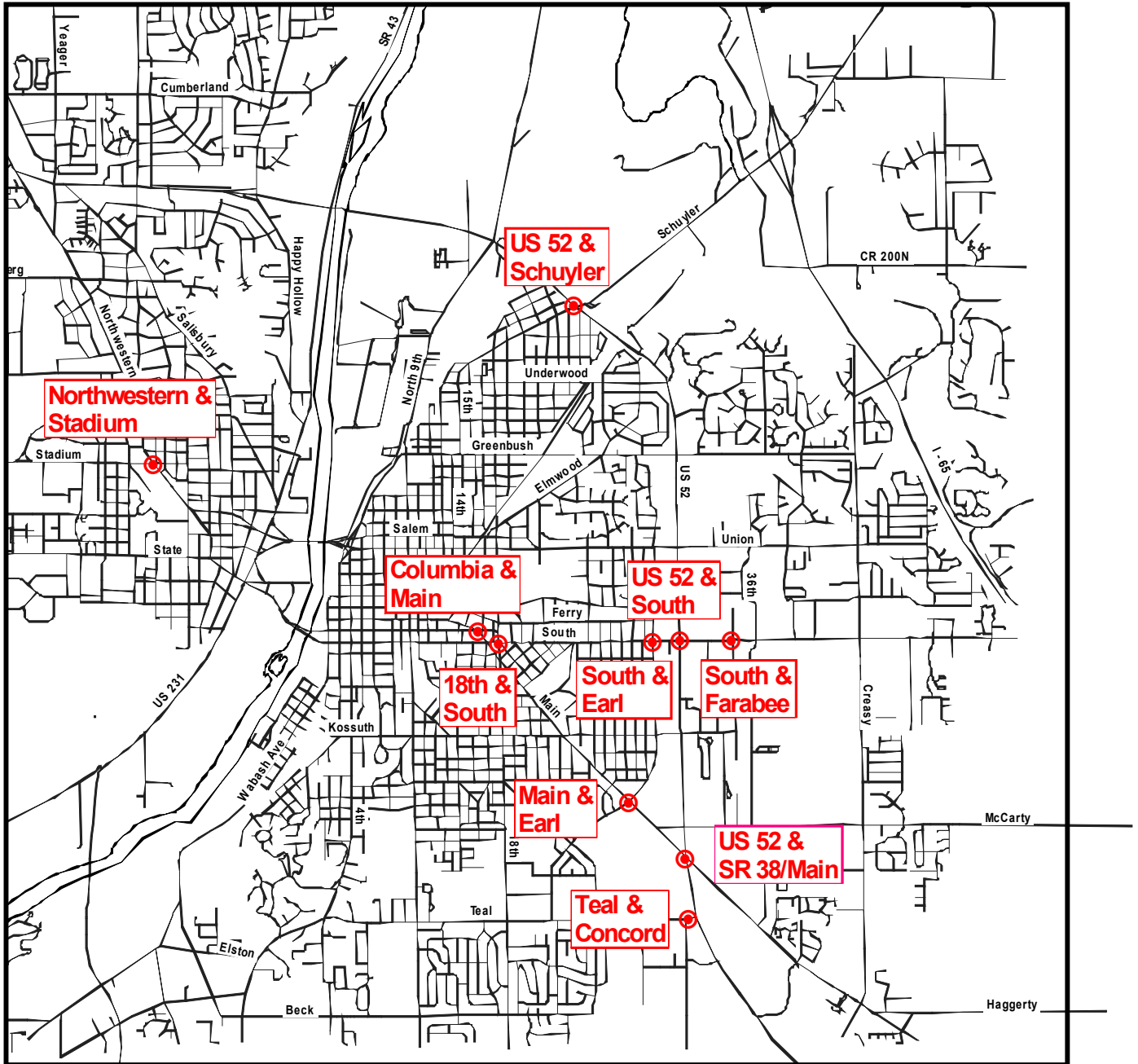


Table 11

Hazardous Intersections Ranked by MEV Rate and Crash Frequency, 2000

Rank	Intersection	2000 Crashes*	ADT*** Entering Volume	MEV**# Rate	CRF****	Crash Frequency Rank
1	10th-Ferry	18	7,293	6.762	3.282	T43
2	Columbia-Main	40	25,406	4.314	2.747	3
3	9th-Main	21	15,899	3.619	2.918	34
4	18th-South St.	35	26,673	3.595	2.731	8
5	Chauncey Ave-Wood	22	17,536	3.437	2.880	T28
6	Concord-Teal	37	29,946	3.385	2.767	T5
7	Earl-Main	37	29,994	3.380	2.694	7
8	Northwestern-Columbia	14	11,360	3.376	3.063	T59
9	9th-Burnetts Rd	10	8,410	3.258	3.208	T95
10	CR 500E-McCarty	14	11,783	3.255	3.046	T59
11	18th-Salem	22	18,973	3.177	2.850	T28
12	9th-Duncan	18	15,811	3.119	2.921	T43
13	22nd-Teal	30	27,665	2.971	2.719	T14
14	4th-Kossuth	18	16,966	2.907	2.893	T35T
15	18th-Ortman	14	13,473	2.847	2.987	T59
T16	2nd-South St.	24	23,502	2.798	2.773	T23
T16	6th-Salem St.	15	14,689	2.798	2.951	T55
18	Creasy-McCarty	30	31,201	2.634	2.682	T14
19	Northwestern-Stadium	34	36,036	2.585	2.639	T95
20	Stadium-Russell	10	10,823	2.532	3.085	T95
21	18th-Greenbush St.	17	18,755	2.483	2.854	T47
22	18th-Kossuth	22	24,337	2.477	2.761	T28
23	Teal-Summerfield	24	26,870	2.447	2.729	T23
24	US 52-S.R. 25N/Schuyler	34	38,505	2.419	2.620	T9
25	6th-Union	12	13,604	2.417	2.983	T76
26	US-52-SR 26	73	82,835	2.414	2.440	1
27	S.R. 26-Farabee	38	43,282	2.405	2.589	4
28	Wiggins-Salisbury	13	14,842	2.400	2.946	T67
29	Shenandoah-Union	13	14,970	2.379	2.943	T67
30	3rd-South	27	31,609	2.340	2.678	T17
31	Stadium-University	14	16,413	2.337	2.906	T59
32	Earl-South St.	37	44,043	2.302	2.584	T5
33	4th-Fountain	12	14,286	2.301	2.962	T76
34	6th-Columbia	17	20,265	2.298	2.826	T47

Table 11 (Continued)

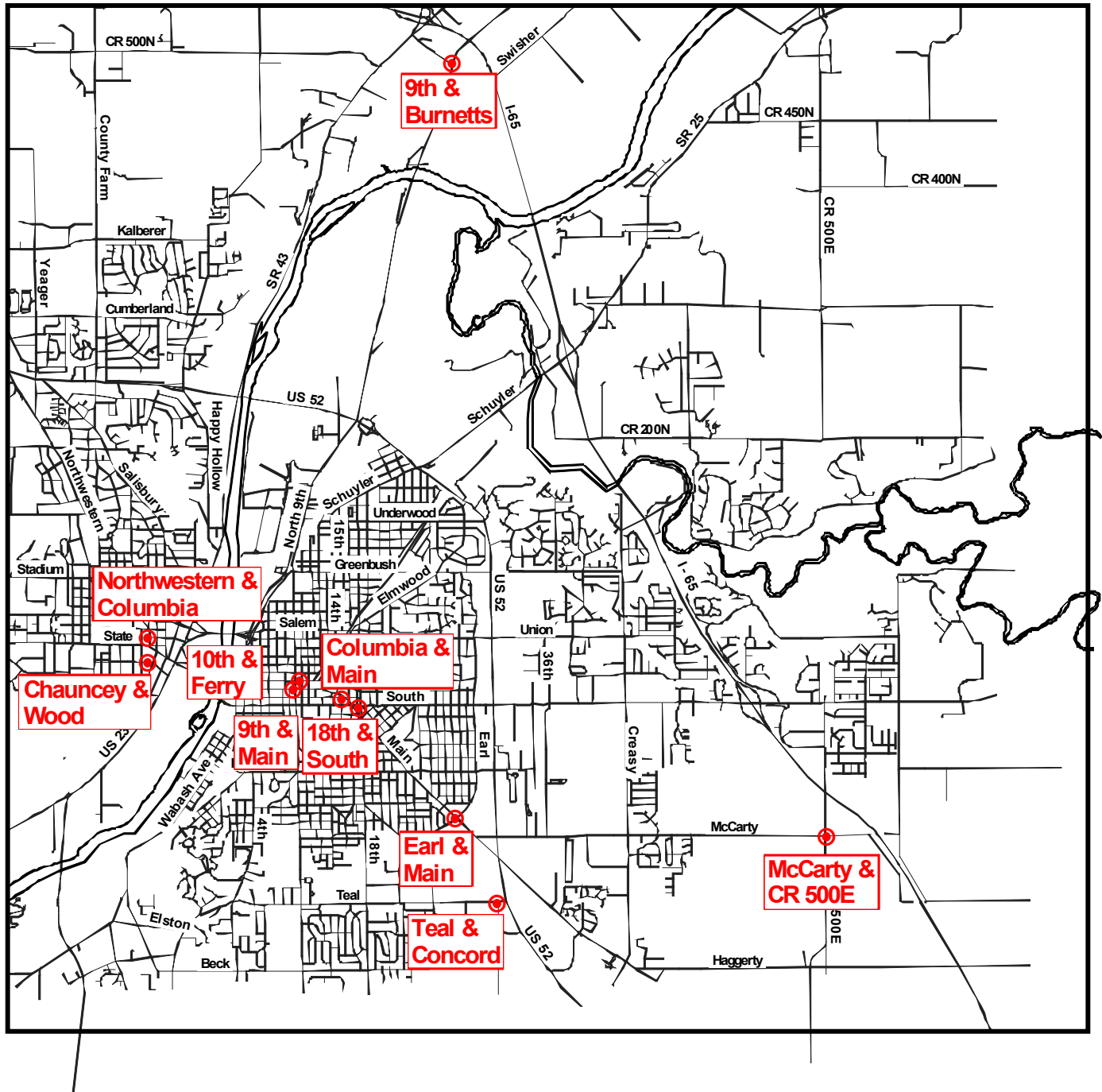
Rank	Intersection	2000 Crashes*	ADT*** Entering Volume	MEV** Rate	CRF****	Crash Frequency Rank
35	Grant-Stadium	12	14,373	2.287	2.960	T76
36	US-52-S.R. 38/Main	45	54,382	2.267	2.531	2
37	US 52-Yeager	25	30,407	2.253	2.689	22
38	4th-South	24	29,643	2.218	2.697	T23
39	Earl-Kossuth	19	23,740	2.193	2.770	T38
40	4th-Main	11	13,968	2.158	2.972	T86
41	9th-Brown	10	13,034	2.102	3.001	T95
42	3rd-Main	10	13,117	2.089	2.999	T95
43	Pierce St.-Wood	14	18,752	2.045	2.854	T59
44	State St.-Salisbury	24	33,089	1.987	2.664	T23
45	9th-Ferry	13	18,084	1.970	2.868	T67
46	18th-Teal	26	36,195	1.968	2.638	T20
47	9th-Greenbush	13	18,152	1.962	2.867	T67
48	Creasy-Union	19	26,684	1.951	2.731	T38
49	Old US 231-S.R. 25	17	23,920	1.947	2.767	T47
50	US 52-Kossuth	32	45,569	1.924	2.575	12
51	US 52-Teal	27	39,048	1.894	2.616	T17
52	4th-Columbia	19	27,619	1.885	2.720	T38
53	6th-South	11	16,059	1.877	2.914	T86
54	US 52-Brady/Creasy	17	24,881	1.872	2.754	T47
55	3rd-Columbia	20	29,524	1.856	2.699	T35
56	Grant-State St.	22	33,177	1.817	2.663	T28
57	State-Pierce/Andrew	18	27,435	1.798	2.722	T43
58	US 52-Duncan	20	30,924	1.772	2.684	T35
59	US 52-Salisbury	26	41,182	1.730	2.602	T20
60	18th-Brady Lane	12	19,121	1.719	2.847	T76
61	US 52-Greenbush St.	31	49,998	1.699	2.552	12
62	S.R. 25-26th/Seqouya	19	30,665	1.698	2.687	T38
63	S.R. 25/Old Romney	13	21,032	1.693	2.812	T67
64	4th-Teal	22	35,916	1.678	2.640	T28
65	US 52-McCarty	27	44,298	1.670	2.583	T17
66	2nd-Columbia	15	24,795	1.657	2.755	T55
67	S.R. 26 – I65 (Ramps A & B)	26	48,225	1.648	2.630	T19
68	18th-Elmwood Ave.	11	18,776	1.605	2.854	T86
T69	Main-Kossuth	16	27,392	1.600	2.722	T53

Table 11 (Continued)

Rank	Intersection	2000 Crashes*	ADT*** Entering Volume	MEV** Rate	CRF****	Crash Frequency Rank
T69	Quincey-River Rd.	11	18,840	1.600	2.853	T86
71	18th-Main	14	24,290	1.579	2.762	T59
72	US 231-Elston Rd.	12	20,830	1.578	2.816	T76
73	Union-18th	15	26,374	1.558	2.735	T55
74	9th-Union	13	23,029	1.547	2.780	T67
75	S.R. 25-CR 300N	10	17,792	1.540	2.874	T95
76	S.R. 26-Creasy	33	59,528	1.519	2.510	11
77	Main-McCarty	12	21,742	1.512	2.800	T76
78	US 52-CR 350S	14	25,748	1.490	2.742	T55
79	Greenbush-Elmwood Ave.	11	20,532	1.468	2.821	T86
80	S.R. 43 -CR 600N	11	20,785	1.450	2.816	T86
81	Northwestern-State/South	17	33,428	1.393	2.732	T47
82	30th-Teal	12	23,757	1.384	2.769	T76
83	US 52/Cumberland	14	29,214	1.313	2.702	T59
84	Main/South	17	35,884	1.298	2.640	T47
T86	S.R. 26-Progress	20	42,675	1.284	2.592	T35
T86	9th-Salem	11	23,838	1.264	2.768	T86
87	S.R. 26-CR 550E	10	21,731	1.261	2.800	T95
88	9th-South St.	13	28,476	1.251	2.710	T67
89	Northwestern-Yeager	11	25,788	1.169	2.742	T86
90	S.R. 38-Haggerty	10	23,607	1.161	2.772	T95
91	S.R. 38-Creasy	16	37,853	1.158	2.625	T53
92	Chauncey Ave-State St.	15	37,277	1.102	2.629	T55
93	State-Russell	12	30,798	1.067	2.686	T76
94	River Rd.-State St.	19	49,433	1.053	2.555	T38
95	US 52-Union	24	63,897	1.029	2.562	T23
96	US 52-US 52 D Ramp	11	30,629	0.984	2.687	T86
97	State St.-Sheetz	10	29,761	0.921	2.696	T95
98	9th-Columbia	10	30,173	0.908	2.692	T95
99	S.R. 26-Shenandoah	12	37,010	0.888	2.631	T76
100	Fowler Ave-Northwestern	10	31,320	0.875	2.680	T95
101	36th-S.R. 26	13	41,093	0.867	2.603	T67
102	S.R. 26-Fairington	12	40,525	0.811	2.606	T76
103	S.R. 26-Hamman	10	37,489	0.731	2.628	T95
104	Grant-Northwestern	10	37,730	0.726	2.626	T95
105	9th-Teal	10	38,869	0.705	2.618	T95

Figure 8

Ten Most Hazardous Locations
by MEV Rate, 2000



V. FIVE-YEAR DATA ANALYSIS: 1996-2000

A comparison of vehicle crashes over time can determine if trends or patterns are developing. If vehicle crashes are increasing at a location, measures should be taken to correct the contributing factor. If vehicle crashes are decreasing because of improvements made, similar measures could be applied to other hazardous locations. Fluctuations in crash totals caused by uncontrollable variables like weather or construction also may appear over time. Time specific comparisons may help to explain these fluctuations.

A. System-wide Analysis

In 1999, Staff decided to expand the study area to include all of Tippecanoe County as opposed to the greater Lafayette area defined in the *1978 Transportation Plan*. While some comparisons to 1999 data can be made, staff chose not to perform a system-wide analysis because of having only two years' worth of comparable data.

B. Intersection Analysis

Staff calculated five-year crash totals to get a broader picture of crash patterns. Intersections having an average of ten or more crashes per year since 1996 were ranked by total number of crashes. Those intersections that appeared in **Figure 7** but did not have the required average also appear; further monitoring is necessary to determine whether these locations will consistently incur ten or more crashes per year in the future.

The intersection with the highest five-year crash total since 1996 is US 52 at SR 26 with 262 (**Table 12**). Looking at the table, US 52 at SR 26 has had the most crashes every year for the past five years. Five of the intersections in the top ten involve US 52 and all involve Principal Arterials. **Figure 10** shows the location of the intersections with the ten highest five-year crash totals.

Table 12**Hazardous Intersections Ranked by
Five-Year Crash Totals, 1996 – 2000**

Rank	Intersection	1996	1997	1998	1999	2000	Total
1	US 52 - SR 26	44	54	41	50	73	262
2	SR 38/Main - US 52	38	39	40	41	45	203
3	Creasy Ln - SR 26	27	55	34	41	33	190
4	US 52 - McCarty	29	44	35	24	27	159
5	Teal - Concord	24	26	34	31	37	152
6	South - Earl	27	27	23	37	36	150
7	Main - Earl	28	22	25	30	37	142
8	US 52 - Greenbush	23	26	29	28	31	137
T9	18th - Teal	28	27	22	29	26	132
T9	US 52 - Salisbury	22	29	31	24	26	132
11	US 52 - Union	21	33	23	29	24	130
12	Stadium - Northwestern	25	22	20	27	34	128
13	US 52 - Teal	27	23	28	21	27	126
14	4th - South	26	27	25	23	24	125
15	US 52 - Kossuth	21	24	23	21	32	121
16	State - River	34	26	19	20	19	118
T17	SR 26 - Farabee	15	16	27	21	38	117
T17	18th - South	17	14	28	23	35	117
19	State - Andrew/Pierce	30	26	20	22	18	116
20	18th - Kossuth	18	28	21	24	22	113
21	State - Grant	24	26	14	24	22	110
22	US 52 - SR 25N/Schuyler	22	19	11	18	34	104
23	Teal - Summerfield	24	21	17	17	24	103
24	3rd - South	19	18	19	19	27	102
25	18th - Salem	14	20	25	19	22	100
26	Creasy Ln - McCarty	18	20	17	14	30	99
27	22nd - Teal Rd	15	19	15	18	30	97
T28	State - Northwestern	17	19	25	17	17	95
T28	Columbia - Main	13	12	18	12	40	95
30	4th - Columbia	24	14	18	17	19	92
31	State - Chauncey	30	21	8	15	15	89
T32	SR 26 - I-65 (Ramps A & B)	16	32	7	7	26	88

Table 12 (Continued)

Rank	Intersection	1996	1997	1998	1999	2000	Total
T32	US 52 - Brady/Creasy	15	18	16	22	17	88
T34	4th - Kossuth	16	16	20	14	18	84
T34	26th/Sequoia - Teal Rd	14	19	17	15	19	84
T36	SR 26 - I-65 (Ramps C & D)	29	23	9	15	7	83
T36	SR 38 - Creasy Ln	27	8	10	22	16	83
38	US 52 - Yeager	17	14	12	13	25	81
39	9th - Salem	6	17	26	20	11	80
40	State - Salisbury	18	14	13	10	24	79
41	US 231/4th - Teal Rd	22	11	8	15	22	78
T42	South - Main	13	18	14	14	17	76
T42	9th - Duncan	12	19	7	20	18	76
T44	6th - Union	22	7	15	19	12	75
T44	Stadium - University	21	12	14	14	14	75
T44	US 52/US 231-Cumberland Ave.	6	14	26	15	14	75
46	Old US 231 - SR 25W	21	12	13	10	17	73
47	SR 43 - I-65 (Ramp A)	17	17	16	8	13	71
T48	US 52 - SR 443 (Ramp D)	32	8	10	9	11	70
T48	6th - Salem	17	13	10	15	15	70
T50	Main - McCarty Ln	14	15	15	13	12	69
T50	18th - Union	13	13	15	13	15	69
T52	18th - Main	15	15	11	13	14	68
T52	State - Russell	12	18	13	13	12	68
T54	30th - Teal Rd	12	19	13	11	12	67
T54	3rd - Columbia	11	14	10	12	20	67
T56	River - Happy Hollow	17	18	16	10	5	66
T56	SR 25 - Old Romney Rd	15	8	17	13	13	66
T56	Earl - Kossuth	11	12	14	10	19	66
T58	SR 25 W - Beck Ln	15	16	12	13	9	65
59	SR 25 N - I 65 (Ramps A & B)	19	10	1	12	22	64
T60	Greenbush - Elmwood	17	11	15	9	11	63
T60	9th - South	15	11	8	16	13	63
T60	SR 26 - 36th	16	10	13	11	13	63
T63	River - Howard	18	16	7	14	7	62
T63	Grant – Northwestern	14	12	14	12	10	62
T65	CR 350S - US 52	21	10	7	9	14	61

Table 12 (Continued)

Rank	Intersection	1996	1997	1998	1999	2000	Total
T65	Main-9th	9	12	6	13	21	61
T67	9th - Union	13	14	13	7	13	60
T67	US 52 - Duncan	8	14	9	9	20	60
T67	Main - Kossuth	9	14	9	12	16	60
T67	2nd-South St.	9	14	7	6	24	60
T67	State Route 26-Progress Dr.	4	8	15	13	20	60
72	9th - Teal Rd	19	8	10	12	10	59
73	9th - Ferry	13	9	11	12	13	58
T74	Northwestern - North	10	20	10	9	8	57
T74	18th - Elmwood	9	15	12	10	11	57
T74	Pierce St.-Wood	6	17	8	12	14	57
T77	River Rd - Robinson	15	14	12	12	3	56
T77	9th - Kossuth	16	12	9	10	9	56
79	US 231 - Beck Ln	10	15	11	10	9	55
80	Northwestern-Columbia	13	5	12	10	14	54
81	Chauncey Ave-Wood	8	6	7	9	22	52
82	US 231-Elston Rd.	17	6	11	5	12	51
83	18th-Greenbush St.	5	9	14	2	17	47
84	State - Roebuck	8	10	12	7	9	46
T85	7th - South	13	9	7	10	6	45
T85	6th-Columbia	6	3	10	9	17	45
87	Wiggins-Salisbury	6	5	10	10	13	44
T88	10th-Ferry	2	7	8	8	18	43
T88	6th-South St.	5	9	11	7	11	43
T90	Grant-Stadium	3	3	12	12	12	42
T90	S.R. 43-CR 600N	9	4	6	12	11	42
T90	State Route 26-Hamman	8	8	11	5	10	42
T93	18th-Ortman	2	5	12	8	14	41
T93	2nd-Columbia	5	3	7	11	15	41
T93	9th-Columbia	8	6	8	9	10	41
T93	9th-Greenbush	4	7	11	6	13	41
T93	Northwestern-Yeager	4	10	8	8	11	41
98	Creasy Lane-Union	9	2	6	3	19	39
99	Stadium-Russell	5	8	7	8	10	38
100	4th-Main	7	4	6	8	11	36

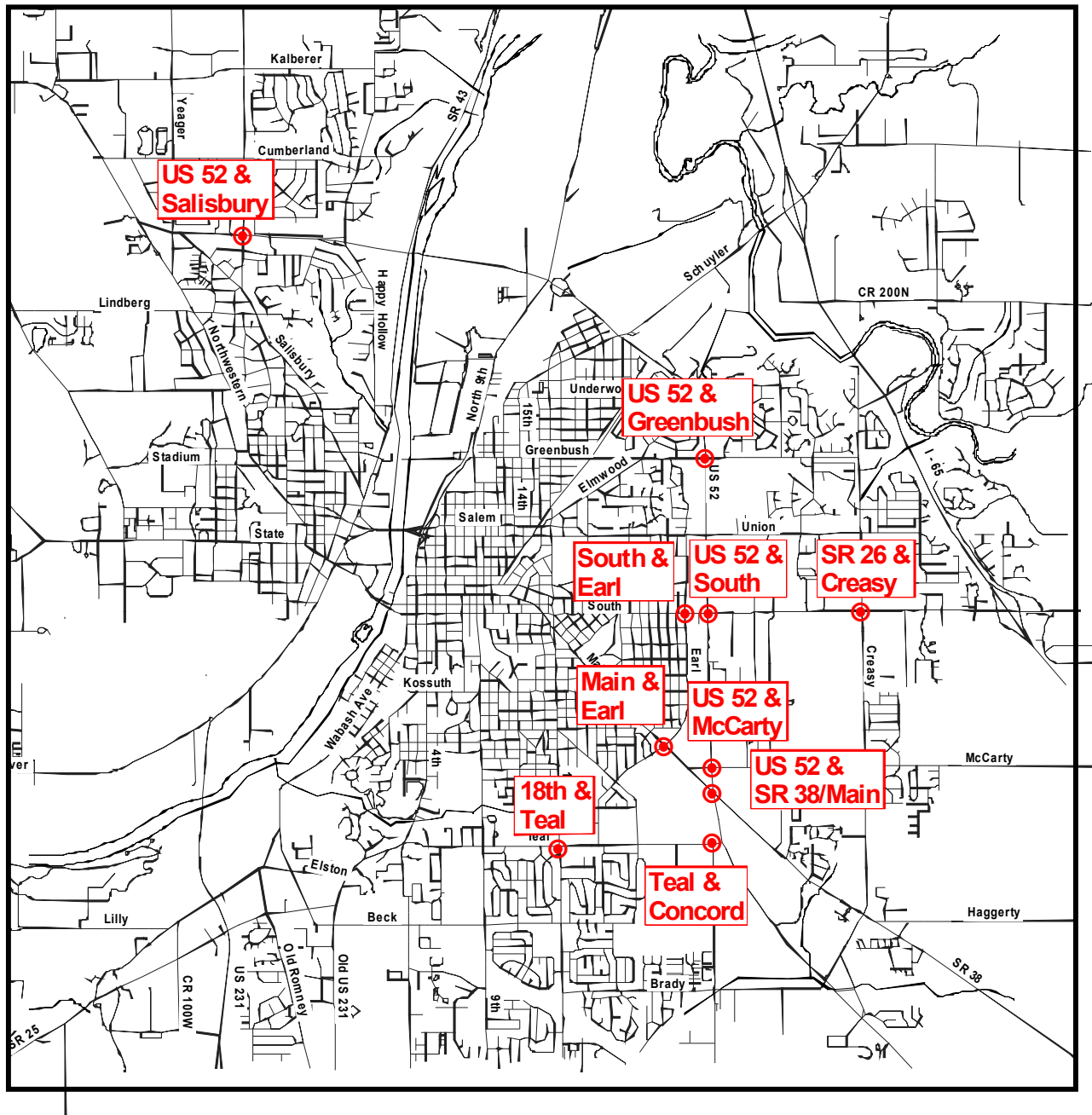
Table 12 (Continued)

Rank	Intersection	1996	1997	1998	1999	2000	Total
T101	18th-Brady Lane	3	4	7	8	12	34
T101	State Route 26-Fairington	0	6	9	7	12	34
102	9th-Brown St.	8	5	5	4	10	32
T103	State St.-Sheetz	3	5	7	5	10	30
T103	Union-Shenandoah	0	1	9	7	13	30
105	Shenandoah-State Route 26	2	0	11	4	12	29
T106	4th-Fountain	4	7	1	3	12	27
T106	S.R. 25-CR 300N	6	1	7	3	10	27
T108	Fowler Ave-Northwestern	3	3	6	2	10	24
T108	State Route 26-CR 550E	2	6	4	2	10	24
T110	US 52 - Underwood	11	3	1	1	7	23
T110	3rd-Main	3	4	1	5	10	23
112	CR 500E-McCarty Lane	3	2	0	1	14	20
113	State Road 38-Haggerty Lane	0	1	4	4	10	19
114	River Rd.-Quincey	0	1	2	4	11	18
115	9th-Burnetts Rd	1	2	0	2	10	15

* "One Hundred Foot Rule" is applied

Figure 9

Ten Most Hazardous Locations by Five-Year Crash Totals, 2000



C. Percent Change Analysis

In 1989, the APC staff resumed its annual Vehicle Crash study. The study is used to identify hazardous locations within the study area. Hazardous intersections can be compared annually to see if improvements made to intersections (or lack thereof) have had significant impacts on Vehicle Crash frequencies.

Staff used the Poisson distribution method to test the significance of 2000 crash increases or decreases. CY 2000 crashes were compared with the average number from 1997 through 1999. Studies have shown that to determine the significance of crash reductions, three-year averages should be used.

Table 13 lists intersections that had either significant decreases or increases in crash frequency for 2000 when compared to their three-year average. In 2000, four intersections had significant crash reductions while nineteen intersections had significant crash increases. **Figure 10** shows these locations. Of all intersections that averaged ten crashes over three years, about one-fourth (26%) of the intersections had a reduction in crashes from its three-year average, down from 60% in 1999.

Leading the way in crash reductions was the intersection of River Rd. and Robinson, a reduction of 75%. SR 26 and I-65 (Ramp C & D) and River Rd and Happy Hollow (SR 443) were second and third respectively. Rounding out the list of reductions was 9th and Salem with 45% fewer crashes than the previous year.

Teal and Concord is an intersection that was troublesome. The number of crashes has increased from 24 in 1996 to a peak of 37 in 2000. CY 2000's total for this location was 37, an insignificant increase over the three-year average. Although INDOT has improved the intersection by physically prohibiting left turns in 2002, the assumed reductions will not be reflected in the data for quite some time.

Unfortunately, the number of intersections with significant increases in 2000 increased from 6 in 1999 to 19. Interestingly, seven intersections from the top-ten frequency list had significant increases. The intersection with the most significant increase in 2000 was Columbia and Main; crashes there rose almost 200% over the previous year. Such a high total for this location had not been expected, so further monitoring is necessary to achieve a more accurate trend. The northbound on- and off-ramps with S.R. 26 also had a 75% increase. However, the crash numbers for this location fluctuate widely, so further study is needed to see what the actual trend is.

Table 13

Intersections ^{**}# With Significant Percent Change, 2000

Intersection	2000 Crashes	1997 - 1999 Average	Percent Change
Significant Decreases:			
River Rd - Robinson	3	12.67	-75%
SR 26 - I-65 (Ramps C & D)	7	15.67	-53%
River - Happy Hollow	5	14.67	-50%
9th - Salem	11	21.00	-45%
Significant Increases:			
Columbia - Main	40	14.00	186%
US 52 - SR 25N/Schuyler	34	16.00	113%
State - Salisbury	24	12.33	95%
(Old) US 231/4th - Teal	22	11.33	94%
US 52 - Yeager	25	13.00	92%
US 52 - Duncan	20	10.67	88%
SR 26 - Farabee	38	21.33	78%
Creasy - McCarty	30	17.00	76%
22nd - Teal Rd	30	17.33	73%
SR 26 - I-65 (Ramps A & B)	26	15.33	70%
3rd - Columbia	20	12.00	67%
SR 26 - Progress Dr.	20	12.00	67%
18th - South	35	21.67	62%
Earl - Kossuth	19	12.00	58%
US 52 - SR 26	73	48.33	51%
Stadium - Northwestern	34	23.00	48%
3rd - South	27	18.67	45%
Main - Earl	37	25.67	44%
US 52 - Kossuth	32	22.67	41%

* "One Hundred Foot Rule" is applied

Location must have minimum three-year average of ten or more crashes

Hazardous Locations by Significant Change by Significant Change, 2000



As drivers become more familiar with recent changes or improvements to the transportation network, the number of vehicle crashes at specific intersections should diminish. Once hazardous locations or intersections are located, more detailed studies in the form of collision diagrams or cost/benefit analyses may provide cost-effective, short-term solutions. Long- and short-range projects can be implemented in a timely manner resulting in a safer and more efficient transportation network.

APPENDIX

INDIANA OFFICER'S STANDARD ACCIDENT REPORT															OFFICE USE ONLY				
State Form 23558R2/Stock 302															Accident I.D. No.				
Mail to: Indiana State Police, Accident Records Section 100 North Senate Avenue, Indianapolis, IN 46204																			
<div style="display: flex; justify-content: space-between;"> <div> Date of Accident MONTH DAY YEAR 1 Day of Week 2 Actual Local Time 3 AM <input type="checkbox"/> PM <input type="checkbox"/> </div> <div> No. Motor Vehicles 4 No. Injured 5 No. Dead 6 No. Trailers 7 </div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div>County 8 Township 9 City/Town or Nearest City/Town 10</div> <div>City/Town or Nearest City/Town 11</div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> Inside Corporate Limits? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Private <input type="checkbox"/> Other <input type="checkbox"/> Distance and Direction From Corporate Limits Miles North 12 Miles South 13 Miles East 14 Miles West 15 </div> <div> Road Accident Occurred On 16 Intersecting Road/Mile Marker/Interchange 17 </div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> If not at Intersection: number of feet from 18 Direction 19 Nearest Intersecting Road/Mile Marker/Interchange 20 </div> <div> 21 </div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> Driver's Name (Last, First, MI) 22 Address (Street, City, State, Zip) 23 Apparent Phys. Stat. (enter no.) 24 Sex 25 Date of Birth MONTH DAY YEAR 26 Arrested? <input type="checkbox"/> Yes <input type="checkbox"/> No 27 Driver's License No. 28 Lic. Type 29 Lic. St. 30 Restr. 31 </div> <div> Driver's Name (Last, First, MI) 32 Address (Street, City, State, Zip) 33 Apparent Phys. Stat. (enter no.) 34 Sex 35 Date of Birth MONTH DAY YEAR 36 Arrested? <input type="checkbox"/> Yes <input type="checkbox"/> No 37 Driver's License No. 38 Lic. Type 39 Lic. St. 40 Restr. 41 </div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> Color 42 Veh. Yr. 43 Make 44 Model Name 45 Veh. Type (enter no.) 46 Lic. Yr. 47 License No. 48 Lic. State 49 Veh. Use (enter no.) 50 Speed Limit 51 Fuel Tax No. 52 Direction of Travel 53 No. Occupants 54 Fire? <input type="checkbox"/> Yes <input type="checkbox"/> No 55 No. Axles 56 Transporting Hazardous Mat. <input type="checkbox"/> Yes <input type="checkbox"/> No 57 Towed To 58 Towed By 59 Registered Owner's Name (Last, First, MI) 60 Address (Street, City, State, Zip) 61 Registered Owner's Name (Last, First, MI) 62 Address (Street, City, State, Zip) 63 License No. 64 Make 65 Year 66 Lic. St. 67 Lic. Yr. 68 </div> <div> Color 69 Veh. Yr. 70 Make 71 Model Name 72 Veh. Type (enter no.) 73 Lic. Yr. 74 License No. 75 Lic. State 76 Veh. Use (enter no.) 77 Speed Limit 78 Fuel Tax No. 79 Direction of Travel 80 No. Occupants 81 Fire? <input type="checkbox"/> Yes <input type="checkbox"/> No 82 No. Axles 83 Transporting Hazardous Mat. <input type="checkbox"/> Yes <input type="checkbox"/> No 84 Towed To 85 Towed By 86 Registered Owner's Name (Last, First, MI) 87 Address (Street, City, State, Zip) 88 Registered Owner's Name (Last, First, MI) 89 Address (Street, City, State, Zip) 90 License No. 91 Make 92 Year 93 Lic. St. 94 Lic. Yr. 95 </div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> INITIAL IMPACT V1 96 V2 97 DAMAGE EST V1 98 V2 99 OTHER PROPERTY (INCLUDE CARGO) Name of Object 100 OWNER'S NAME AND ADDRESS 101 Damage Est. (use chart) 102 </div> <div> PEDESTRIAN Direction 103 Street/Highway 104 Arrested? <input type="checkbox"/> Yes <input type="checkbox"/> No 105 Apparent Phys. Stat. (enter no.) 106 What was pedestrian doing before accident? Enter No. 1 Not in roadway 2 Standing in roadway 3 Playing in roadway 4 Pushing or working on vehicle 5 Other working in roadway 6 Walking in roadway with traffic 7 Walking in roadway against traffic 8 Getting on or off vehicle 9 Getting on or off school bus 10 Crossing or entering not at intersection 11 Crossing or entering at intersection 12 Other 107 Pedestrian Traffic Control? <input type="checkbox"/> Yes <input type="checkbox"/> No 108 </div> </div>																			
<div style="display: flex; justify-content: space-between;"> <div> DRIVER OF VEHICLE 1 (as listed above) DRIVER OF VEHICLE 2 (as listed above) </div> <div> 7 </div> </div>																			

Diagram

Indicate NORTH
by an arrow

NARRATIVE (Refer to Vehicle by Number)

D1 Insured By	D2 Insured By	
Other Participant(s) Name, Address (etc.)		
Name of Witness No. 1	Address	Location at Time of Accident
Name of Witness No. 2	Address	Location at Time of Accident
Name of Person Arrested	I.C. Code(s)	Name of Person Arrested
		I.C. Code(s)

Time Notified	<input type="checkbox"/> AM <input type="checkbox"/> PM	Time Arrived	<input type="checkbox"/> AM <input type="checkbox"/> PM	Other Location of Investigation	Investigation Complete <input type="checkbox"/> Yes <input type="checkbox"/> No	Photos Taken <input type="checkbox"/> Yes <input type="checkbox"/> No
Assisting Officer				I.D. No.	Agency	Date of Report
Assisting Officer				I.D. No.	Agency	Driver Report Form Furnished
Investigating Officer's Signature				I.D. No.	Agency	

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ACCIDENT REPORT CODE SHEET

1. CONTRIBUTING CIRCUMSTANCES 2. PRE-ACCIDENT VEHICLE ACTION 1. Going Straight Ahead 2. Turning on Red 3. Making Right Turn 4. Making Left Turn 5. Making U Turn 6. Exiting to Ramp 7. Merging 8. Changing Lanes 9. Driving Left of Center 10. Crossed Median 11. Overtaking 12. Passing 13. Backing 14. Starting in Traffic 15. Slowing or Stopping 16. Stopped in Traffic 17. Start From Parked Pos. 18. Entering Parked Pos. 19. Parked 20. Avoiding Obj. in Road 21. Driverless Moving 22. Other* 23. Driving Off Road on the Right		1. Alcoholic Beverages 2. Illegal Drugs 3. Prescription Drugs 4. Driver Apparently Asleep 5. Driver Inattention 6. Driver Illness 7. Unsafe Speed* 8. Failure to Yield Right of Way 9. Disregarded Signal/Regulatory Sign 10. Left of Center 11. Improper Passing 12. Improper Turning 13. Improper Lane Usage 14. Following Too Closely 15. Unsafe Backing 16. Wrong Way on One Way 17. Pedestrian(s) Actions* 18. Passenger Distraction 19. Violation Driver License Restrictions 20. Engine Failure or Defective 21. Accelerator Failure or Defective 22. Brake Failure or Defective 23. Tire Failure or Defective 24. Headlight Defective or Not On 25. Other Lights Defective* 26. Steering Failure 27. Window/Windshield Defective 28. Oversize/Overweight Load 29. Insecure/Leaky Load 30. Tow Hitch Failure 31. Animal(s) Present on Roadway 32. Glare 33. Surface Material Loose 34. Material on Surface (Include Weather) 35. Holes/Ruts in Surface 36. Shoulder Defective 37. Road Under Construction* 38. Obstruction Not Marked 39. Lane Marking Obscured 40. View Obstructed By A Veh. 41. View Obstructed By* 42. Other* 43. Jack Knifing	7. ACCIDENT TYPE 1. Hit and Run 2. Collision 3. Overturned 4. Non-Collision 8. LOCATION OF FIRST DAMAGE OR INJURY 1. Intersection 2. Driveway Access 3. Interchange Area 4. Off Roadway 5. Shoulder 6. Median 7. Roadway 9. KIND OF LOCALITY 1. School/ Playground 2. Residential 3. Commercial/ Industrial 4. Rural 5. Public Park 6. Urban Interstate 10. ROAD CONSTRUCTION/MAINTENANCE/UTILITY WORK PRESENT? 1. Yes 2. No 11. LIGHT CONDITION 1. Daylight 2. Dawn/Dusk 3. Dark (Street Lights On) 4. Dark (Street Lights Off) 5. Dark (No Street Lights) 12. WEATHER 1. Clear 2. Cloudy 3. Rain 4. Snow 5. Sleet/Hail/ Freezing Rain 6. Fog/Smoke/Smog 13. ROAD SURFACE 1. Concrete 2. Blacktop 3. Brick 4. Dirt/Gravel 5. Other* 14. ROAD CHARACTER 1. Straight/Level 2. Straight/Grade 3. Straight/Hillcrest 4. Curve/Level 5. Curve/Grade 6. Curve/Hillcrest 15. SURFACE CONDITION Must use 1-6 1. Dry 2. Wet 3. Muddy 4. Slush 5. Snow/Ice 6. Other* 15A. WERE HAZARDOUS MATERIALS INVOLVED? 1. Yes 2. No
3. COLLISION INVOLVED 1. Other Motor Veh. 2. Pedestrian(s) 3. Bicyclist 4. RR/Train 5. Animal Drawn Veh. 6. Animal 7. Deer-List Number Also 8. Light Support/Utility Pole 9. Guide Rail/Median Barrier 10. Impact Attenuator 11. Sign Post 12. Tree 13. Building/Wall 14. Curbing 15. Fence 16. Bridge Support 17. Culvert/Head Wall/ Drainage Structure 18. Snow Embankment/ Rock Cut/Ditch 19. Earth Embankment/ Fire Hydrant 20. Traffic Signal 21. Mail Box 22. Other Non-Fixed Obj* 23. Other Fixed Obj*		4. TRAFFIC CONTROLS 1. Officer/Crossing Guard/Flagman 2. R.R. Crossing Gate/Flagman 3. R.R. Crossing Flashing Signal 4. R.R. Crossing Sign/Pavement Markings 5. Traffic Control Signal 6. Flashing Signal 7. Stop Sign 8. Yield Sign 9. Lane Control 10. No Passing Zone 11. Other Regulatory Sign/Markings* 12. None 5. WERE AUTOMATED CONTROLS OPERATING PROPERLY? 1. Yes 2. No*	
6. COLLISION DIAGRAM 1. Rear End 2. Head On 3. Same Direction Sideswipe 4. Opp. Direction Sideswipe 5. Off Road Collision 6. Right Angle 7. Left & Right		LEFT TURNS 8. 9. 10. 11. RIGHT TURNS 14. 15. 16. 17. 18. 19.	
16. INJURED 1. Vehicle 1 2. Vehicle 2 P - Pedestrian B - Bicyclist O - Other* 17. POSITION IN OR ON VEHICLE 2-7 Passengers 6. Include Passengers on Motorcycle 7. Include Person in Truck Bed 8. Riding/Hanging on Outside 8		21. NATURE OF MOST SEVERE INJURY 1. Severed 2. Internal 3. Minor Burn 4. Severe Burn 5. Abrasion 6. Minor Bleeding 7. Severe Bleeding (Arterial) 8. Fracture/Dislocation 9. Contusion/Bruse 10. Complaint of Pain 11. None Visible 22. LOCATION OF MOST SEVERE INJURY 1. Chest 2. Neck 3. Eye 4. Face 5. Head 6. Back 7. Shoulder/ Upper Arm 8. Elbow/Lower Arm/Hand 9. Abdomen/Pelvis 10. Hip/Upper Leg 11. Knee/Lower Leg/Foot 12. Entire Body 23. VICTIMS INJURY STATUS 1. Conscious 2. Semi-conscious 3. Incoherent 4. Unconscious 5. Shock 6. Dead 7. Refused Med 27. TEST GIVEN 1. None 2. Alcohol 3. Drug 4. Refused 28. TYPE GIVEN 1. Blood 2. Urine 3. Breath 4. Other* 29. RESULTS	
18. SAFETY EQUIPMENT USED (Drivers and Injured) 1. No Restraint 2. Lap Belt 3. Harness 4. Child Restraint 5. Helmet 6. Airbag 7. Other* 18A. WAS SAFETY EQUIPMENT EFFECTIVE? 1. Yes 2. No 19. EJECTION/TRAPPED (Drivers and Injured) 1. Not Ejected 2. Partially Ejected 3. Ejected 4. Trapped In 5. Pinned Under 20. LIST NAMES AND ADDRESSES OF INJURED			

ACCIDENT REPORT CODE SHEET (cont'd)

MOTOR VEHICLE TYPE	VEHICLE USE
<ol style="list-style-type: none"> 1. Passenger car/station wagon 2. Pickup 3. Van 4. Truck 5. Semi Tractor (Only) 6. Semi Tractor/1 Trailer 6A. Semi Tractor/2 Trailers 7. Combination Vehicle 8. Recreational Vehicle 9. Bus 10. School Bus 11. Police Car 12. Fire Truck 13. Ambulance 14. Motorcycle 15. Moped 16. Snowmobile 17. Motorized Bicycle, Motor Scooter, Minibike 18. Farm Equipment 19. Special Vehicle 20. Other * 	<ol style="list-style-type: none"> 1. Personal (Farm, Company) 2. Commercial (Buses, Taxis, Common and Contract Carriers) 3. Rental, not leased 4. School 5. Police, Fire, Ambulance 6. On emergency run 7. Military 8. Highway Department 9. Other Government (Postal, Welfare, etc.) 10. Public Utilities (Gas, Electric, etc.) 11. Other*

DRIVER LICENSE RESTRICTIONS	APPARENT PHYSICAL STATUS	ESTIMATE OF DAMAGES
<ol style="list-style-type: none"> A. Glasses or Contact Lenses B. Outside Rearview Mirror C. Daylight Driving Only D. Automatic Transmission G. Special Controls I. Employment Only K. Motorcycle Only M. To and From Employment Only N. Employers Vehicle Only U. Power Steering V. P.P. Chauffeurs Rest. to Taxi Only X. Authorized State Owned Vehicles Only Y. Special Restrictions 1. Probation DWI 2. Probation HTO 3. Photo Exempt 	<ol style="list-style-type: none"> 1. Normal 2. Had Been Drinking 3. Physical Handicaps 4. Ill 5. Fatigued 6. Asleep 7. Drugs/Medication 	<ol style="list-style-type: none"> 1. Under \$200 2. \$200 - \$1000 3. \$1001 - \$2500 4. \$2501 - \$5000 5. \$5001 - \$10,000 6. \$10,001 - \$25,000 7. \$25,001 - \$50,000 8. \$50,001 - \$100,000 9. Over \$100,000